Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

1.(currently amended) A method for deriving information about ~~at least one~~ a second station that operates on a medium scanned by a first station, comprising ~~the steps of~~:

~~(a)~~ scanning by the first station during a predetermined sensing interval ~~that comprises at least one consecutive sensing interval,~~ for ~~at least one~~ an activity on the medium carried out by the ~~at least one~~ second station;

~~(b)~~ measuring by the first station the ~~scanned at least one~~ activity of the ~~at least one~~ second station; and

~~(c)~~ deriving by the first station ~~at least one~~ an activity pattern of the second station over the predetermined sensing interval ~~from the measured scanned at least one~~ based on the activity of the ~~at least one~~ second station, wherein scanning by the first station includes:

detecting a busy period and an idle period during the predetermined sensing interval;

accumulating a received power level of the activity;

sensing the busy period when the received power level exceeds a predetermined power threshold and a preamble is detected; and

sensing the idle period when the received power level does not exceed than the predetermined power threshold and the preamble is not detected.

2. (cancelled)

3. (cancelled)

4. (currently amended) The method of claim ~~3~~ 1, ~~wherein step (a)~~ further comprising ~~comprises the step of (a.2)~~ detecting a virtual busy period.

5. (currently amended) The method of claim 4, ~~wherein step (a.2) further comprises the step of (a.2.1) regardless of the accumulated received power level,~~ further comprising sensing a

detected virtual busy period as an allocated medium by the ~~at least one~~ second station that is not used for transmission by the ~~at least one~~ second station.

6. (currently amended) The method of claim 5, ~~wherein step (b) further comprises the step of~~ ~~(b.1)~~ further comprising ascertaining an absolute number of occurrences and a total duration of the ~~at least one scanned~~ activity over the sensing interval.

7. (currently amended) The method of claim 6, ~~wherein step (c) further comprises the step of~~ ~~(c.1)~~ further comprising computing from the total duration of the ~~at least one~~ activity a percentage of time the ~~at least one~~ activity occurred during the sensing interval.

8. (cancelled)

9. (currently amended) The method of claim 1, further comprising ~~the step of (e) step for~~ using the ~~at least one~~ derived activity pattern to discover at least one of -

i.   the ~~at least one~~ second station ~~is~~ being a non-IEEE 802.11 device,

~~ii.~~   the ~~at least one~~ second station ~~is~~ being an IEEE 802.11e device,

~~iii.~~   the quality of service (QoS) parameter set being applied by the ~~at least one~~ second station,

~~iv.~~   the ~~at least one~~ second station ~~uses~~ using a hybrid coordination function (HCF),

~~v.~~   the ~~at least one~~ second station ~~is~~ being one of IEEE 802.11b and IEEE 802.11g, and

~~vi.~~   ~~at least~~ the ~~at least one~~ second station ~~is~~ being hidden from the first station.

10. (currently amended) The method of claim 9, further comprising ~~the step of~~

~~(f)~~   receiving a Medium Sensing Measurement Request by the first station for the derivation of at least one medium access pattern of the ~~at least one~~ second station; and

~~(g)~~   in response to the received Medium Sensing Measurement Request, transmitting by the first station a Medium Sensing Measurement Report containing at least one medium access activity pattern of the ~~at least one~~ second station derived by the first station.

11. (cancelled)

12. (cancelled)

13. (currently amended) A method for obtaining information about medium activity patterns of ~~at least one~~ a second station on a medium scanned by a first station, comprising ~~the steps of~~:

transmitting by the first station a Medium Sensing Measurement Request;

receiving, by the first station in response to the transmitted request, a Medium Sensing Measurement Report comprising ~~at least one~~ an activity pattern of the ~~at least one~~ second station;

~~step for~~ using by the first station the ~~at least one derived~~ activity pattern of the ~~at least one~~ second station to discover at least one of -

~~i.~~   the ~~at least one~~ second station ~~is~~ being a non-IEEE 802.11 device,

ii.   the ~~at least one~~ second station ~~is~~ being an IEEE 802.11e device,

iii.   the quality of service (QoS) parameter set being applied by the ~~at least one~~ second station,

iv.   the ~~at least one~~ second station ~~uses~~ using a hybrid coordination function (HCF),

v.   the ~~at least one~~ second station ~~is~~ being one of IEEE 802.11b and IEEE 802.11g, and

vi.   ~~at least the at least one~~ the second station ~~is~~ being hidden from the first station.

14. (cancelled)

15. (currently amended) An apparatus at a first station for obtaining information about ~~at least one~~ a second station that operates on a medium scanned by the first station, comprising:

a receiver for receiving an incoming signal from the ~~at least one~~ second station over a predetermined sensing interval ~~that comprises at least one consecutive sensing interval~~;

an activity acquisition and pattern derivation circuit that measures activity patterns of said incoming signal ~~received therein~~ and derives patterns ~~therefrom~~;

a timer that provides a time reference in timer units (TUs); and

a control processor, coupled to said activity acquisition and pattern derivation circuit and said timer ~~and during the predetermined interval~~, configured to sense ~~at least one of~~ a busy and an idle activity of said incoming signal and derive an activity pattern as a histogram over time, wherein the control processor is configured to:

detect a busy period and an idle period during the predetermined sensing interval;

accumulate a received power level of the activity;

sense the busy period when the received power level exceeds a predetermined power threshold and a preamble is detected; and

sense the idle period when the received power level does not exceed than the predetermined power threshold and the preamble is not detected ~~therefrom~~.

16. (canceled)

17. (currently amended) The apparatus of claim ~~16~~ 15, wherein said control processor is further configured to sense a detected virtual busy period as an allocated medium by the ~~at least one~~ second station that is not used for transmission by the ~~at least one~~ second station, regardless of the accumulated received power level.

18. (currently amended) The apparatus of claim 17, wherein said control processor is further configured to use the ~~at least one~~ derived activity pattern to discover at least one of -

~~i.~~   the ~~at least one~~ second station ~~is~~ being a non-IEEE 802.11 device,

~~ii.~~   the ~~at least one~~ second station ~~is~~ being an IEEE 802.11e device,

~~iii.~~   the quality of service (QoS) parameter set being applied by the ~~at least one~~ second station,

~~iv.~~   the ~~at least one~~ second station ~~uses~~ using a hybrid coordination function (HCF),

~~v.~~   the ~~at least one~~ second station ~~is~~ being one of IEEE 802.11b and IEEE 802.11g, and

~~vi.~~   ~~at least the at least one~~ the second station ~~is~~ being hidden from the first station.

19. (currently amended) The apparatus of claim 18, wherein:

the first station receives a Medium Sensing Measurement Request for the derivation of at least one medium access histogram of the ~~at least one~~ second station; and

in response to the received Medium Sensing Measurement Request, the first station transmits a Medium Sensing Measurement Report containing at least one medium access histogram of the ~~at least one~~ second station derived by the first station.

20. (cancelled)

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21. (cancelled)